vertebral column, which of course agrees with the anatomical findings in such cases: the aorta being relatively fixed by the intercostal arteries.

Print No. 3 is interesting as it is a print of a patient who has hypertrophic arthritis of his lumbar spine, marked arteriosclerosis and has had double pleurisy; he further complained of pain along his dorsal spine and right-sided chest pains. It will be noted on comparing print one and print three that the right border of the cardiac shadow in the latter print is straight, that the cardio-hepatic angle is almost obliterated and at this point there appears to be a slight thickening of the shadow cast by the convexity of liver and diaphragm; moreover many whitish lines can be seen in the negative over the lungs and heart—the above points being suggestive of pleural and pericardial adhesions—but of more immediate interest is the aortic shadow which is here evident not only to the left of the vertebral shadow but also to its right, in other words the shadow cast by the descending thoracic aorta is much wider than the shadow cast by the normal sized vessel and betokens a dilatation of that artery. The pain along his dorsal spine was relieved by potassium iodide.

Print No 4 is of even more interest. The patient was a lady 70 years of age, who ten years previously had been treated for gastric ulcer, she at that time living on liquid food for six months. She had been well up to two years ago, since when she had been subject to attacks of intense localized epigastric pain

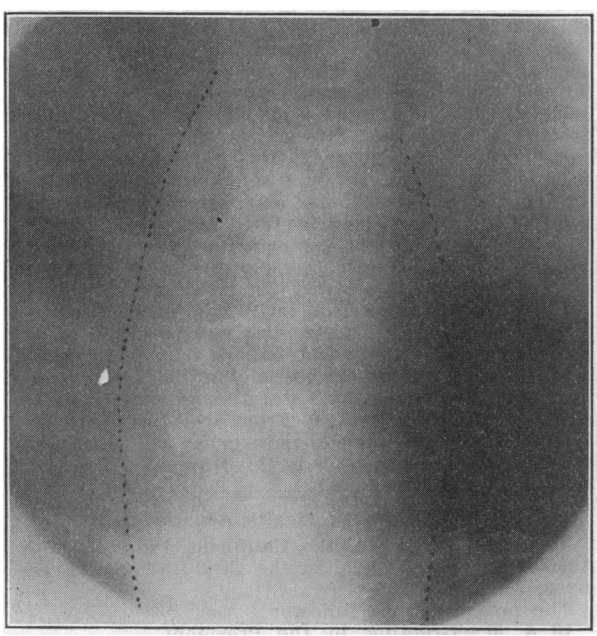

Fig. 4. The dotted lines mark the borders of the dilated vessel.

and to a duller more continuous pain accompanied by throbbing in the epigastric region. In a year she had lost 20 pounds and her condition had been ascribed to cancer of the stomach or aneurism of the abdominal aorta. Examination showed a thin non-anemic woman with slightly yellow conjunctivæ. At intervals, Murphy's manoeuvre caused pain, Robson's point was extremely tender and the right eighth, ninth and tenth segmental nerve areas hypersensitive. In addition a well marked systolic bruit was always audible in the epigastric region, beginning a little above the xiphisternum and being transmitted into both femorals. Pulsation was very marked but no tumor of any kind was palpable. The vessels elsewhere did not pulsate unduly. There was no cardiac murmur. Potassium iodide and rest in bed would cause temporary disappearance of the dull aching pain and the subjective sense of pulsation. The bruit persisted and in all postures. After much eliminative work the clinical diagnosis was cholecystitis with adhesions and a dilatation of the aorta high up between the pillars of the diaphragm. I took many plates but entirely failed to get evidence of any such dilatation till finally common sense came to my rescue and suggested that the dilatation might be supra-diaphragmatic. Then my search was rewarded and I present Print No. 4, which shows a distinct fusiform aneurismal dilatation of the descending thoracic aorta, best marked at the level of the ninth and tenth dorsal vertebræ. Operation followed by a modified Carlsbad course relieved her gall bladder condition. She still has to take small doses of potassium iodide for the relief of the throbbing and dull pain due to the aneurismal dilatation.

Addenda.

A fifth patient seen since these prints were presented complained of left sided dull chest pains of fifteen years' duration, corresponding in area to the middle chest zone. During the last six months he had suffered from periodic severe pain of an angina character. His heart was large, second aortic sound accentuated, systolic blood tension 210-220 m.m. hg. Peripheral vessels thickened. Field of cardiac response good. The Huchard postural inversion of pulse rate was present. Urine, specific gravity 1.025, free from albumen, casts and sugar. The clinical diagnosis was general arteriosclerosis. It seemed probable that the chest pain depended upon involvement of the descending thoracic aorta, the more recent angina pains upon an extension of the process to the root of the aorta or to the coronary arteries. The Radiogram verified our suspicions in a striking manner showing a well marked dilatation of the upper part of the descending thoracic aorta. In one patient who had similar right sided chest pain the autopsy demonstrated extensive arteriosclerosis of a dilated descending thoracic aorta with an almost entire obliteration of the mouths of the intercostal arteries. The association of such with the pain in the areas supplied by the intercostal vessels was extremely suggestive. Such pains are not necessarily radiating nor do they definitely correspond to any intercostal nerve spinal root or segment area.

PRELIMINARY REPORT ON EPIDIDYMOTOMY IN THE TREATMENT OF BLENORRHAGIC EPIDIDYMITIS.*

By L. BAZET, M. D., San Francisco.

THE greatest and quickest relief in the treatment of blenorrhagic epididymites is accomplished by epididymotomy.

Like appendicitis, this affection ought to be considered a surgical one. In its evolution the morbid process is contained in a closed cavity and the septic secretions cannot be drained. In all cases we have pain, fever, swelling and a decided leukocytosis from 12,000 to 27,000. Once epididymotomy is performed it is a surprise to notice its good effects; the pain stops, the fever falls, leukocytosis subsides; there are no relapses, and the cure is obtained rapidly.

In going over the history of this affection as far back as 1838 we find that orchitis and epididymitis, if not the same disease, at least were subjected to the same treatment.

At that time Ricord said "that there was no blenorrhagic affection of the organs contained in the scrotum without a swelling of the epididymis." He further demonstrated that it was not the testicle that was primarily affected, and that if it did become involved, it was only by propagation, and to a small extent only, the chief lesion being in the epididymis.

In 1876 Reclus proved that the periepididymitis is greater than the epididymitis itself. To-day we find

* Read before the San Francisco Polyclinic Gathering.

the lesions begin by an endo-deferentitis, and are followed by endo-epididymitis, interstitial epididymitis and a predominant periepididymitis.

Of all the parts of the genital apparatus that blenorrhagia affects, the epididymis shows us the most constant and the deeper lesions; it is increased in volume two to four times, and in its cavity we find small nodules of the size of a lentil, or of a pea, containing a puriform liquid; these nodules are nothing more than abnormal dilatations of the epididymis, plugged with a mass of various leukocytes imbedded in coagulated serum. The tubes appear permeable. In some of the tubes the epithelial lining has desquamated, the continuity is broken and the pus cells have wandered into the adjoining connective tissue. This connective tissue is quite heavily infiltrated with lymphocytes, its blood vessels injected, and some of its fibrillæ forced apart by serum transudate.

The treatment of this affection was identical from 1857, in the time of Curling and Gosselin, with what it was in 1900. It consisted of rest, anti-phlogistics, anodynes, refrigeration, compression, tapping of the vaginalis (Velpeau), incision of the testicular albuginea (Vidal de Cassis). Up to this latter date it was a timid treatment, a disarmed expectation, sacrificing to atrophy and sclerosis a muscular apparatus so necessary to the progression of the sperm.

In October, 1903, Baernaman, assistant professor of Neisser, treated 28 cases of epididymitis by puncture and, in the liquid aspirated, he found the gonococcus; he found also that the serum of these patients had often the power of agglutination for the gonococcus. Its results after the puncture were cessation of the local pain, disappearance of the sensation of tension, fall of the fever. No accident followed the puncture; the extreme pain was the only objection. No mention is made by him of leukocytosis, at least I have not read it in the translation.

In April, 1905, Belfied of Chicago, in an article in the *Journal of the American Medical Association*, entitled: "Pus Tubes in the Male, and Their Surgical Treatment," advocates the incision of the epididymis and its drainage by stitching the cut edges of the cavity to the cut edges of the skin.

Without asking priority for the operation, which has been witnessed by many of my assistants and many physicians in various hospitals, and at dates going as far back as 1897, as shown by the records of the French Hospital, I submit to-day what I consider to be a contribution to the surgery of this affection.

In 1897 I performed my first operation at the French Hospital with the following technic: I chose the ligamentum scrotalis for the incision. We know that the globus minor of the epididymis adheres to the testicle by a layer of very thick connective tissue; the globus minor of the epididymis is outside of the vaginalis and the respective relations of the globus minor, of the epididymis, of the inferior pole of the testicle, of the vaginalis, and of the scrotum are maintained by the ligamentum scrotalis Pasteau. It is at this point that there is no danger of wounding the testicle or opening the vaginalis. Seizing firmly the swollen indurated nodule of the globus minor of the epididymis in the left hand, an incision one inch long is made downwards into the cavity of the epididymis. At first the swollen nodules were punctured and the walls of the cavity were stitched to the incised skin; later on I performed partial epididymectomy,—that is, I extirpated the nodules hoping that anastomosis among the tubules could be made; but, after a case of double epididymitis operated on in this way had resulted in sterility, I changed my technic and now I perform an epididymotomy, that is, I open the cavity of the epididymis, as before stated, expose the nodules, relieve the tension, puncture the nodules, if pus is present, and stitch the walls of the epididymis to the skin. The wound is packed with gauze impregnated with 1-10 icthoyl and glycerine and the organ well supported. The wound heals in a week; the patient is able to be up in four to seven days. Compare this with the conservative treatment; the recovery is greatly in favor of the epididymotomy.

The cases treated by epididymotomy are getting on well; as quickly as the cases treated by puncture or by extirpation of nodules; further, the danger of sterility by this method is lessened.

I think that there is a great opening for this operation in the army and navy, as the cessation of pain, fall of the fever and ultimate recoveries are more quickly obtained than by any other treatment.

In the last eight years I have operated on 65 patients in the following hospitals: French Hospital, 43; City and County Hospital, 19; the United States Presidio Hospital, 1; the Waldeck Sanitarium, 2. The operation is benign; it ought to be performed as soon as the disease is diagnosed.

I have found the gonococcus in one-third of my cases. I never had any atrophy, nor any hernia, nor any necrosis of the testicle, nor any mortality.

DISCUSSION.

Dr. Reynolds: From my own personal experience I can add nothing to what Dr. Bazet has said. I know that his work has been original and independent, though without having gone over the literature I can not say it is the first work along this line.

After seeing a large number of these cases with Dr. Bazet, I can say that I am heartily in favor of it though it is so radical that one has to see it several times before giving one's sanction. The operative treatment compares favorably with the conservative in every way. The time of the patient in the hospital is no longer, and when they leave there is very little after effect. They are reduced more nearly to the normal than with palliative methods. The time of the operation is short, and if we were in the habit of using gas it could be as well done under this anesthetic. There is no accident, no mortality and no complication to be feared. The fall in temperature is immediate. The patients come into the hospital suffering from fever, pain, leukocytosis and all the signs of an abscess in a confined space, and shortly after the operation the temperature falls to normal, leukocytosis drops, pain is relieved and the patients are put at rest.

I believe the operation, with its most effective technic, causes sterility, but this can be urged as an objection only by those who believe that epididymitis itself does not render the testicle sterile. I do not believe this, and hence think the disease is as likely to sterilize as is the operation. From every point of view I have been completely won over by the operation and shall treat acute cases in this way.

California Public Health Association.

The sixth session of the California Public Health Association will be held in the City Hall, San Francisco, April 16, 1906.

The program is as follows:

10 A. M.—Greeting, by the President.

10:30 A. M.—"The Condition of California Water Supplies," by Dr. N. K. Foster, secretary of the State Board of Health.

Noon recess.

1:30 P. M.—Address by George C. Pardee, Governor of California.

2:30 P. M.—"The Sanitary Quality and Purification of Public Water Supplies," by Professor Hyde of the University of California.

3:30 P. M.—"Sanitary Disposal of Sewage," by George L. Hoxie, City Engineer of Fresno.

4:30 P. M.—One hour devoted to questions and answers.

Each paper will be opened for general discussion immediately after its reading. The discussion of the "Sanitary Disposal of Sewage" will be opened by Dr. Chas. F. Clark of Willits.

The association will meet at the banquet board in the evening, when short addresses of a general character will be indulged in.